

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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In the Matter of)	10100101
)	FEDERAL COMMUNICATIONS COMMISSION
Amendment of Part 90 of the)	OFFICE OF THE SECRETARY
Commission's Rules to Permit)	
Mobile Use of Frequencies in the)	
Band 72-76 MHz By Eligible)	RM
Users in the Petroleum and Power)	
Radio Services)	

To: The Commission

PETITION FOR RULE MAKING
OF THE
AMERICAN PETROLEUM INSTITUTE
AND THE
UTILITIES TELECOMMUNICATIONS COUNCIL

THE AMERICAN PETROLEUM INSTITUTE

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PETITION FOR RULE MAKING OF THE AMERICAN PETROLEUM INSTITUTE AND THE UTILITIES TELECOMMUNICATIONS COUNCIL

The American Petroleum Institute ("API") and the Utilities Telecommunications Council ("UTC"), pursuant to Section 1.401(a) of the Rules and Regulations of the Federal Communications Commission ("FCC" or "Commission") respectfully request the Commission to initiate a rule making proceeding that looks toward amendment of Sections 90.63, 90.65, 90.67, 90.73, 90.79, 90.91, 90.175, and 90.257 of the Commission's rules to allow for low power mobile use of designated channels in the frequency band 72-76 MHz by entities eligible for licensing in the Petroleum and Power Radio Services.

I. PRELIMINARY STATEMENT

- trade association representing over 200 companies involved in all aspects of the oil and gas industries, including exploration, production, refining, marketing and pipeline transportation of petroleum crude oil, petroleum products and natural gas. Among its many activities, API acts on behalf of its members as a spokesperson before federal and state regulatory agencies and legislative bodies. The API Telecommunications Committee evaluates and develops responses to state and federal proposals affecting telecommunications facilities employed in the oil and gas industries.
- 2. The Telecommunications Committee is API's primary committee concerned with telecommunications regulatory matters. It is supported and sustained by licensees that are authorized by the Commission to operate, among other telecommunications facilities, two-way land mobile radio facilities in the Private Land Mobile Radio Services and point-to-point microwave systems in the Private Operational-Fixed Microwave Service. These telecommunications facilities are used to support the search for and production of oil and natural gas. These systems are also utilized to

ensure the safe pipeline transmission of natural gas, crude oil and refined petroleum products, and for the processing and refining of these energy sources, as well as for their ultimate delivery to industrial, commercial, and residential customers. The facilities licensed to API's members are thus essential to the provision of our nation's energy sources.

- 3. Petroleum and natural gas entities use assignments from the band 72-76 MHz for fixed operations to support supervisory control and data acquisition (SCADA) networks, as well as for remote control links associated with mobile radio systems. Some petroleum and natural gas entities also use frequency assignments in this band for mobile operations pursuant to rule waivers. Mobile use of these assignments generally consists of operations between portable headsets employed on drilling platforms, in refineries, at gas compressor stations, and at other petroleum and natural gas industry installations.
- 4. UTC is the national representative on communications matters for the nation's electric, gas, water, and steam utilities. Approximately 2,000 utilities are members of UTC, ranging in size from large combination electricass-water utilities serving millions of customers to small,

rural electric cooperatives and water districts serving only a few thousand customers. All non-Federal members of UTC are eligible for licensing in the Power Radio Service, and many utilities rely on both private land mobile and operational-fixed radio systems to assure reliable and secure communications for the safe and efficient operation of their public service utility systems. UTC is also the certified frequency coordinator for land mobile frequencies in the Power Radio Service and, as such, has a strong interest in the availability of adequate spectrum resources for Power Radio Service eligibles.

II. <u>DISCUSSION</u>

5. Ten frequencies in the band 72-76 MHz are allocated for low power two-way mobile radio use by entities eligible for licensing in the Manufacturers, Railroad, Special Industrial, and Forest Products Radio Services. $\frac{1}{2}$ Although entities eligible for licensing in the Petroleum or Power Radio Service may utilize other frequencies in the

^{1/} The following channels have been made available for low power mobile radio use: 72.44 MHz, 72.48 MHz, 72.52 MHz, 72.56 MHz, 72.60 MHz, 75.44 MHz, 75.48 MHz, 75.52 MHz, 75.56 MHz and 75.60 MHz. See 47 C.F.R. § 90.67 (Forest Products Radio Service); § 90.73 (Special Industrial Radio Service); § 90.79 (Manufacturers Radio Service); § 90.91 (Railroad Radio Service); § 90.257(b) (1990).

band 72-76 MHz for fixed station operations, these entities must first obtain a waiver of the Commission's rules in order to utilize any of the ten low power frequencies in this band for mobile operations. API and UTC submit that the public interest will be served by the authorization of low power frequencies in the 72-76 MHz band to Petroleum and Power Radio Service eligibles on a routine basis for mobile operations. Moreover, there is no rationale for excluding Petroleum or Power Radio Service eligibles from utilizing these channels for mobile operations. The Commission should therefore undertake amendment of its rules to allow for routine licensing of the low power 72-76 MHz channels by Petroleum and Power Radio Services entities for two-way mobile radio communications.²/

6. Eligible users in the Manufacturers Radio Service also have access to an additional twenty channels in the band 72-76 MHz for mobile communications. $\frac{3}{}$

^{2/} Specific rule amendments proposed by joint petitioners are set forth in Appendix A, attached hereto.

^{3/} The following twenty channels have been made available for additional low power mobile radio use in the Manufacturers Radio Service on a non-exclusive basis: 72.02 MHz, 72.04 MHz, 72.06 MHz, 72.08 MHz, 72.10 MHz, 72.12 MHz, 72.14 MHz, 72.16 MHz, 72.18 MHz, 72.20 MHz, 72.22 MHz, 72.24 MHz, 72.26 MHz, 72.28 MHz, 72.30 MHz, 72.32 MHz, 72.34 MHz, 72.36 MHz, 72.38 MHz, and 72.40 MHz. See 47 C.F.R. § 90.79(c).

assignments are non-exclusive and are allocated on a fixed basis to, among others, the Petroleum and Power Radio Services. Petitioners recommend that these channels also be made available to the Petroleum and Power Radio Services for mobile use on a non-exclusive basis. $\frac{4}{}$

a need for portable headset communications in industrial settings such as refineries, compressor stations, and fossil and nuclear electric power generation plants. Because of the high level of noise generated by activities at these sites, headset equipment can be essential to effective employee communications and safety. For example, low power portable headsets are needed on fixed off-shore oil and gas production platforms in order to facilitate constant communications between crane operators and crane support personnel during drilling and production operations. In the event of an emergency, such a communications capability may

^{4/} The Commission has proposed to make available twenty additional channels in the band 72-76 MHz for low power mobile use in the Manufacturers Radio Service. See Amendment of Part 90 to Increase the Number of Frequencies in the 72-76 MHz Band for Low-Power Mobile Use, PR Docket No. 91-295 (Notice of Proposed Rule Making), released October 31, 1991. These channels should also be made available to the Petroleum and Power Radio Services for mobile use if and when the Commission elects to dedicate these channels for low power mobile use.

be critical to the safety of platform personnel as well as capital equipment and the environment. This same equipment also facilitates effective communications in refineries where potentially hazardous conditions exist. Noise levels are high and hands-free operation of communications equipment can be critically important.

- 8. Low power mobile operations on frequencies in the 72-76 MHz band are ideal for many utility functions. Typical uses include nuclear plant refuelling, radiation protection, radiation waste cleanup, power plant maintenance, and heavy equipment operations. Radio equipment for these types of operation must be capable of operating in a very high noise environment, and must be compatible with hard hats and full face respirators. In addition, the portable radio equipment must be designed to permit operating personnel to have both hands free for delicate work functions, while maintaining voice communications in full duplex mode. Radio equipment for this band has been developed for use in other private land mobile services which would be ideal for routine licensing by Power and Petroleum Radio Service eligibles.
- 9. Although frequency assignments in the band 72-76 MHz are not the only channels available for two-way

mobile voice communications, alternative frequencies are inadequate under many circumstances to serve the needs of petroleum and power entities. High power channels are frequently unacceptable because of the increased potential of receiving destructive interference from stations using transmitters having greater power. Of the low power frequency alternatives to 72-76 MHz, UHF 12.5 kHz offset assignments are not always fully reliable because of the potential for adjacent channel interference from high power equipment. Not only are these offset frequencies susceptible to adjacent channel interference, they are available only on a secondary basis. Moreover, should the Commission decide to restructure the mobile bands below 470 MHz, as it is considering in PR Docket No. 91-170, this offset spectrum may no longer be designated for low power use. There are also a pair of low power VHF assignments available in the Business Radio Service. Unfortunately, there is presently an inadequate selection of equipment available for secure communications on these two channels. Accordingly, from both an operational and equipment standpoint, the 72-76 MHz band is the most appropriate spectrum for low power two-way radio communications.

10. Adoption of the proposed rule changes will increase spectrum efficiency in the band 72-76 MHz by

permitting the accommodation of additional users without resulting in harmful interference to existing users. Allowing energy industry users to share these channels for two-way communications will have no detrimental impact on existing users. Petroleum and natural gas exploration, production and distribution operations take place in geographically remote environments far from the limited areas of operation of low power mobile radio systems utilized in manufacturing, special industrial, railroad and forest products settings. The intended locations for Power Radio Service use of the low power 72-76 MHz frequencies are equally remote from the locations of most existing users. Indeed, most electric utility use of these frequencies would occur within the confines of electric generating plants, which are usually located far away from residential areas, and are well shielded with thick concrete and steel walls. In any event, both the low power nature of the intended transmissions and the requirement that use of such frequencies be fully coordinated ensures that interference to existing users will not occur. In fact, the petitioners are unaware of any interference complaints associated with the existing mobile operations which have been authorized to Power and Petroleum Radio Service eligibles on a rule waiver basis.

- 11. In examining the philosophy of the actions that have permitted the several services to share use of the ten low power 72-76 MHz channels, it is clear that the Petroleum and Power Radio Services are essentially indistinguishable from the other radio services which have access to these assignments. Indeed, there is no evidence that the Commission ever intended to specifically exclude petroleum and power entities from the use of such frequency assignments.
- Originally, ten channels in the 72-76 MHz band were allocated for mobile use only to eligibles in the Manufacturers Radio Service. In 1972, the Commission amended its rules to permit Special Industrial and Railroad Radio Service licensee use of these same ten channels for low power two-way communications. In authorizing such use, the Commission concluded that the low power in-plant nature of the frequency use, combined with the geographical separation of manufacturing, special industrial and railroad site locations, would not result in interference to such communications in manufacturing plants. Amendment of Parts 2, 91 and 93 of the Commission's Rules, Concerning the Allocation and Assignment of Frequencies in the 72-76 MHz Band, 34 F.C.C.2d 863 (1972). Similarly, in 1984, the Commission expanded the eligibility for low power use of the 72-76 MHz frequencies to include eligibles in the Forest Products

Radio Service. Again, the Commission found that the expected separation of forest products operations from other users of these frequencies, combined with their low power nature, should produce a low probability of interference among users. Amendment of Part 90 of the Rules to Make Ten Frequencies in the 72-76 MHz Band Available to the Forest Products Radio Service for Low Power Mobile Operations, 56 R.R.2d 1523 (1984).

Industrial, Railroad and Forest Products Radio Services dictate that the Commission grant similar treatment to the Petroleum and Power Radio Services. Like eligibles in these other Industrial and Land Transportation Radio Services, Petroleum and Power Radio Services users have a compelling need for low power 72-76 MHz operations. Also like such eligibles, the generally isolated location of petroleum and power activities ensures that the intended use of such frequencies will not interfere with the communications of existing licensees. 5/

^{5/} This same rationale supports allowing Petroleum and Power Radio Service eligible users access for mobile use to the additional twenty 72-76 MHz channels presently assignable to eligibles in the Manufacturers Radio Service for low-power mobile use. Moreover, the general fixed use of these frequencies at higher output power levels further guarantees that such facilities will not receive interference from co-channel mobile operations.

III. CONCLUSION

- in the public interest. Such changes will contribute to the safety and efficiency of petroleum and power operations by satisfying a demonstrated demand for low power channels. Because of the geographical separation of such operations from those of existing licensees, the low power nature of communications on the thirty 72-76 MHz channels, and the continuing requirement for frequency coordination, adoption of the proposed rules will not result in interference to existing licensees. Accordingly, adoption of these changes will improve spectrum efficiency in the 72-76 MHz band by permitting the accommodation of additional users without any adverse effect on existing licensees.
- ments will lessen the burden on the Commission of processing routine waiver requests. Numerous entities in the Petroleum and Power Radio Services have already requested and received rule waivers to operate on the ten low power 72-76 MHz frequencies. As the demand for such operations increases, the number of such waiver requests may grow dramatically. The continued processing of such requests is an injudicious

use of scarce Commission resources. As the Commission recently observed: "For applicants to continue to prepare and the Commission to continue to process what have seemingly become routine waivers places a needless burden on both the applicants and the Commission." Amendment of Section 90.21 of the Commission's Rules to Provide for Higher Output Power on Certain Fire Radio Service Frequencies, FCC 91-150, released May 30, 1991.

WHEREFORE, THE PREMISES CONSIDERED, the American Petroleum Institute and the Utilities Telecommunications Council respectfully urge the Federal Communications

Commission to grant this Petition for Rule Making and institute a rule making proceeding consistent with the proposal set forth herein.

Respectfully submitted

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APPENDIX A

Proposed Rule Amendments

1. Section 90.63(c) Frequencies Available:

Power Radio Service Frequency Table

Frequency or band Class of station(s)	Limitations
72-76	<u>3</u> 26, 27
72.04	26, 27 26, 27 26, 27, 28 26, 27 26, 27 27 28
72.60	29 29 29 29 29 29 29 29

- (26) This frequency is shared with fixed stations in other services and is subject to no protection from interference.
- (27) The frequency is available on a shared basis in the Manufacturers, Power and Petroleum Radio

Services and interservice coordination is required. All communications on this frequency must be conducted within the boundaries or confines of a power plant, factory, liquefied natural gas facility, shipyard, mine, substation, pumping station, operations control room, any high noise area, or where protective breathing apparatus must be used. All operations on this frequency are subject to the provisions of § 90.257(b).

- (28) This frequency is shared with the Radio Control (R/C) Service, part of the Personal Radio Services, where it is used solely for the radio control of models.
- (29) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, Power, and Petroleum Radio Services and interservice coordination is required. All communications must be conducted within the boundaries or confines of a power plant, factory, liquefied natural gas facility, shipyard, mine, substation, pumping station, operations control room, any high noise area, or where protective breathing apparatus must be used. All operations on this frequency are subject to the provisions of § 90.257(b).

2. Section 90.65(b) Frequencies Available

Petroleum Radio Service Frequency Table

* * *

Frequency or band	Class of station(s)	Limitations
72-76 72.02	Operational-fixed	<u>11</u> 43, 44
72.04	do	43, 44
<u>72.06</u> 72.08	<u></u> <u>do</u> do	<u>43, 44</u> 43, 44, 45
<u>72.10</u>	do	43, 44
72.12	do	43, 44
<u>72.14</u>	do	<u>43, 44</u>
<u>72.16</u>	do	<u>43, 44, 45</u>
<u>72.18</u> 72.20	<u></u> <u>do</u> do	<u>43, 44</u> 43, 44
72.22	do	43, 44
72.24	do	43, 44, 45
72.26	do	<u>43, 44</u>
<u>72.28</u>	do	<u>43, 44</u>
72.30 72.32	dodo	<u>43, 44</u> 43, 44, 45
72.34	do	43, 44
72.36	do	43, 44
<u>72.38</u>	<u></u> <u>do</u>	<u>43, 44</u>
<u>72.40</u> 72.44	do	<u>43, 44, 45</u>
<u>72.44</u> 72.48	<u></u> <u>do</u> do	<u>46</u> 46
72.52	do	46 46 46 46 46 46 46 46
72.56	do	<u>46</u>
72.60	<u>do</u>	<u>46</u>
<u>75.44</u>	do	<u>46</u>
<u>75.48</u> 75.52	<u></u> do	40 46
75.56	do	40 46
75.60	do	46 41
150-170	Base or mobile	41

- (43) This frequency is shared with fixed stations in other services and is subject to no protection from interference.
- (44) This frequency is available on a shared basis in the Manufacturers, Power and Petroleum Radio Services and interservice coordination is

required. All communications on this frequency must be conducted within the boundaries or confines of a petroleum or natural gas exploration or producton site, pipeline terminal, pump or compressor station or refinery. All operations on the frequency are subject to the provisions of § 90.257(b).

- (45) This frequency is shared with the Radio Control (R/C) Service, part of the Personal Radio Services, where it is used solely for the radio control of models.
- (46) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, Power, and Petroleum Radio Services and interservice coordination is required. All communications must be conducted within the boundaries or confines of a petroleum or natural gas exploration or production site, pipeline terminal, pump or compressor station or refinery. All operations on this frequency are subject to the provisions of § 90.257(b).

3. Section 90.67(c) Explanation of assignment limitations, appearing in the frequency tabulation of paragraph (b) of this section:

* * *

(34) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, <u>Power and Petroleum</u> Radio Services and interservice coordination is required. All communications on this frequency must be conducted within the boundaries of a logging site or confines of a plant, factory, lumber or paper mill. All operations on this frequency are subject to the provisions of § 90.257(b).

4. Section 90.73(d) Explanation of assignment limitations appearing in the frequency table of paragraph (c) of this section:

* * *

(7) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, <u>Power and Petroleum</u> Radio Services and interservice coordination is required. All communications must be conducted within the boundaries or confines of a plant, factory, shipyard, mill, mine, farm, ranch, or construction area. All operations on this frequency are subject to the provisions of § 90.257(b).

5. Section 90.79(d) Explanation of assignment limitations appearing in the frequency tabulation of paragraph (c) of this section.

* * *

- (2) This frequency is available on a shared basis in the Manufacturers, Power and Petroleum Radio Services and interservice coordination is required. All communications on this frequency must be conducted within the boundaries or confines of plants, mills, yards, or other manufacturing areas. All operations on this frequency are subject to the provisions of \$ 90.257(b).
- (4) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad <u>Power and Petroleum</u> Radio Services and interservice coordination is required. All communications must be within the boundaries or confines of plants, mills, yards, or other manufacturing areas. All operations on this frequency are subject to the provisions of § 90.257(b).

6. Section 90.91(c) Explanation of assignment limitations appearing in the frequency table of paragraph (c) of this section.

* * *

(2) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, <u>Power and Petroleum</u> Radio Services and interservice coordination is required as communications must be within the boundaries or confines of railroad terminals or yards. All operations on this frequency are subject to the provisions of § 90.257(b).

7. Section 90.175(f) The following applications need not be accompanied by evidence of frequency coordination:

* * *

(3) Applications for frequencies in the 72-76 MHz band except for mobile frequencies listed in §§ 90.63(d)(27) and (29), 90.65(c)(44) and (46), 90.67(c)(34), 90.73(d)(7), 90.79(d)(4), and 90.91(c)(2).